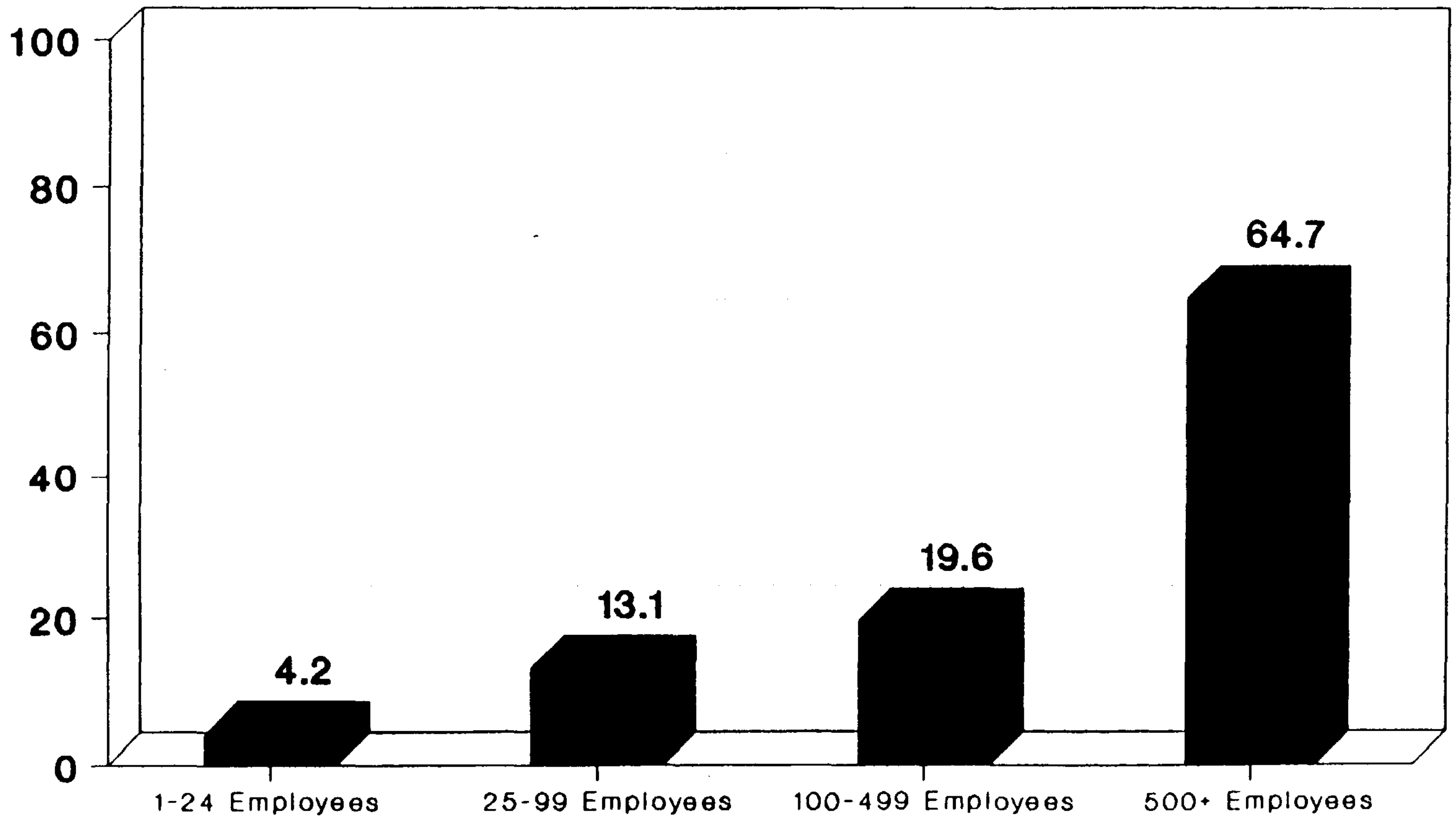
# United States Telephone Association
## Post-Retirement Health Care Study
## Summary of Data on National Prevalence of Post-Retirement Medical Benefit Plans




**% Total EE's Covered by Company Size**

*(Source = United States General Accounting Office)*

Godwins

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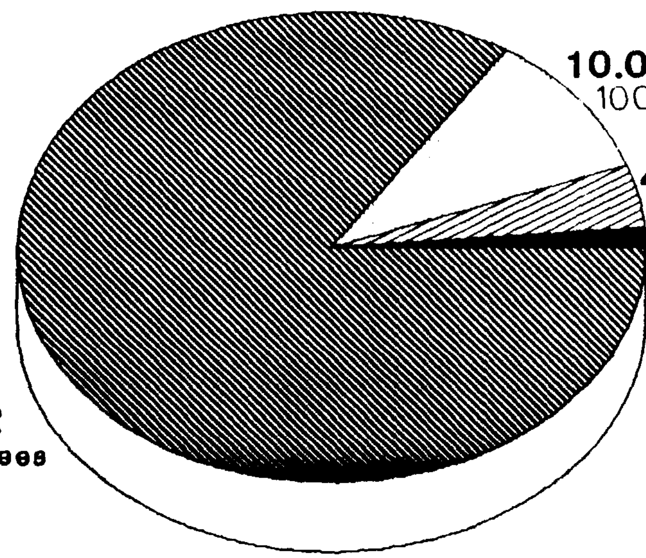



% of Covered Employees by Company Size

(Source = United States General Accounting Office)

## APPENDIX B - METHODS AND ASSUMPTIONS

Below is a description of the key methods and assumptions used for the derivation of the Demographic Adjustment as well as the basic BLI calculations. The methods and assumptions utilized in developing the other Adjustments are sufficiently documented in Section III.

### Demographic Adjustment

The three adjustments making up the Demographic Adjustment were developed by calculating and comparing SFAS 106 costs for sample populations incorporating the GNP and TELCO demographic characteristics based on the age and service distribution of GNP and TELCO employees respectively. The calculations utilized pre- and post-65 per capita claim amounts that bear the same relationships to each other as do the pre- and post-65 BLIs for GNP and TELCO. All assumptions other than withdrawal, and retirement age (already discussed) were as follows:

discount rate - 8.13%
trend rate - 10.08% in 1991 decreasing gradually to 5.56% for the year 2006 and later
retirement eligibility - 55
amortization period for transition obligation - 20 years
percent married - 65%

### BLI Calculations

The calculation of individual plan Benefit Level Indicators used the following data and methods.

A data base of annual claim amount distributions was used, based on the experience of 39,436 retirees who participate in employer sponsored post-retirement medical programs administered by a large national insurance company. For pre- and post-65 claimants, frequency weights, monetary weights, hospital/

drug/other ratios and Medicare reimbursements by type were developed. This data base has 35 claim ranges with average claim amounts in each range from $15 to $48,753.

The calculations also used our data base of the post-retirement medical plan provisions for 830 private sector employers. For both comprehensive and base plus plans the following data items were available;

- hospital room and board, either as days covered or a percentage
- surgical coverage
- in-patient physician coverage
- out-patient physician coverage
- diagnostic coverage
- prescription drug coverage, either percentage or flat dollar co-pay
- major medical deductibles
- major medical co-pay percentage
- out-of-pocket maximums
- annual/lifetime maximums
- Medicare integration method (i.e., carve-out, supplement or coordination of benefits)
- participant and dependent contribution rates

These provisions are available separately for pre- and post-65 claimants.

A particular plan's gross BLI was computed by determining how much the plan would reimburse at each claim amount in the distribution data base. The reimbursement amount was determined separately for each type of charge; e.g., hospital, drug, etc. Medicare reimbursement was taken into account explicitly for each type of charge based on the form of Medicare integration in the plan. Each reimbursement was then divided by the corresponding claim to obtain a reimbursement ratio. These ratios were then weighted by the claim amount weights in the distribution to determine the gross BLI.

Per retiree contribution rates were then compared to per retiree claim amounts, and that ratio was used as an offset to the gross BLI to determine the final net pre- and post-65 BLIs for each company in the data base.

After average pre- and post-65 BLIs had been determined for GNP and TELCO (see Section III page 11 for methodology), pre- and post-65 weightings were calculated as the percentages of total SFAS 106 cost associated with pre- and post-65 claims, determined using the same methodology as for the Demographic Adjustment. These were then applied to the pre- and post-65 BLIs to develop GNP BLI and TELCO BLI.

By way of illustration, suppose a comprehensive plan pays 80% after a $200 deductible, subject to an out-of-pocket maximum of $1,500. After 65, Medicare integration is 'Supplement'. Participants contribute $10 per month.

In the $4,000 - $5,000 claim range, for example, we find the average claim to be $4,479. Since this is a comprehensive plan, we derive the pre-65 reimbursement utilizing the total claim amount, that is (4,479 - 200) times 80%, or $3,423. The out-of-pocket maximum has not been met. Therefore, the pre-65 reimbursement ratio in the charge range is 0.7642. The ratios for all ranges are averaged using weights given by the distribution table to determine the gross pre-65 BLI.

The post-65 reimbursement recognizes Medicare integration, in this example the method is Medicare Supplement. We determine the breakdown of charges to be $1,776 for hospital, $567 for prescription drugs, and $2,136 for all other charges. Total Medicare reimbursement is $2,047 (calculated explicitly from

Medicare provisions) and is immediately taken out; in this case $1,177 from hospital, $870 from other medical charges and nothing from drug charges. The plan provisions are then applied to the balance of $2,432, giving a plan reimbursement of $1,786 ((2,432 - 200) times 80%). This produces a post-65 reimbursement ratio of 0.3987 for this claim range. As with the pre-65 case the ratios for all ranges are then averaged using weights given by the distribution table to determine the gross post-65 BLI.

The gross BLIs are then adjusted to reflect participant contributions. Our example here might produce gross BLIs of 0.85 pre-65 and 0.32 post-65. The participant contribution of $10 per month translates into a reduction in the gross BLIs of 0.03 pre-65 and 0.04 post-65, giving final BLIs of 0.82 and 0.28 respectively.

# Appendix C

## Part I: Derivation of the Model

### I. Households

All households are assumed to be identical and obtain utility from money and leisure as well as each of the m produced goods. Each household solves the following maximization problem

$$\text{(A1)} \quad U^* = \max_{(C_i, M, N)} \left( C^{\gamma}(M/P)^{1-\gamma} - (\phi N^{\eta+1})^{1/\eta} \right)$$

subject to the constraint that

$$\text{(A2)} \quad M + \Sigma_i P_i C_i = I$$

where

$$\text{(A3)} \quad C = (\Sigma_i \alpha_i C_i^{(\theta-1)/\theta})^{\theta/(\theta-1)}$$

$$\text{(A4)} \quad P = (\Sigma_i \alpha_i^{\theta} P_i^{1-\theta})^{1/(1-\theta)}$$

and $C_i$ is the consumption of produced good i, $P_i$ is the nominal price of produced good i, M is the amount of money held at the end of the period, N is the amount of labor supplied, I is the total nominal value of resources available to the household, C is the bundle of consumption goods defined by the aggregator function in (A3), and P is a price index defined in (A4). (Note that the price index P in (A4) is not the fixed-weight GNP price index. The solution of the model produces prices for each of the m goods which can then be combined to calculate the appropriate fixed-weight GNP price index.) The parameters of the utility function are $\gamma$, which equals the share of the household's nominal expenditure on produced goods rather than on money balances; $\theta$, which is the elasticity of substitution between the consumption of any pair of goods; $\alpha_i$, $i = 1,\ldots,m$, which indicate the weight of each good in the household's utility function; $\eta$, which is the elasticity of labor supply; and $\phi$ which characterizes the degree of disutility of labor.

The utility function in equation (A1) is additively separable between $(C_i, M)$ and N. This separability allows us to solve the household's maximization problem in two stages. First, we will maximize utility with respect to $C_i$ and M, and then we will choose the utility-maximizing level of labor supply N. Choosing $C_i$ and M to maximize the utility function in (A1) subject to the constraint in (A2) yields the following first-order conditions:

$$\text{(A5)} \quad \alpha_i C_i^{-1/\theta} \gamma C^{\gamma-1+1/\theta} (M/P)^{1-\gamma} = \mu P_i$$

$$\text{(A6)} \quad (1-\gamma) C^{\gamma} (M/P)^{-\gamma}/P = \mu$$

where $\mu$ is the Lagrange multiplier on the constraint (A2).

Combining the first-order conditions (A5) and (A6) yields

(A7) $\alpha_i C_i^{-1/\theta} \gamma C^{(1-\theta)/\theta} M = (1-\gamma) P_i$

Multiplying both sides of (A7) by $C_i$ and then summing over all i yields

(A8) $\Sigma_i P_i C_i = (\gamma/(1-\gamma)) M$

Substituting (A8) into (A2) yields

(A9) $M = (1-\gamma) I$

Substituting (A9) into (A7), summing over all i, and using the definition of the price index in (A4) yields

(A10) $PC = \gamma I$

Substituting (A9) into (A7) and then using (A10) yields the demand for good i

(A11) $C_i = \alpha_i^{\theta} (P_i/P)^{-\theta} \gamma I/P$

Substituting (A9) into (A11) yields

(A12) $C_i = \alpha_i^{\theta} (P_i/P)^{-\theta} (\gamma/(1-\gamma)) M/P$

Having solved for the optimal values of $C_i$ and M, we now solve for the optimal value of labor supply N. First, substitute the optimal values of $C_i$ (eq. A11) and M (eq. A9) into the utility function in (A1) to obtain

(A13) $U^* = \max\limits_{N} \; (\gamma^{\gamma}(1-\gamma)^{1-\gamma}(I/P) - (\phi N^{\eta+1})^{1/\eta})$

subject to $I = wN + rK^* + M + \pi$, where $\pi$ is the (present value of) post-retirement health benefits to be received by the household.

The first-order condition for labor supply N is

(A14) $\gamma^{\gamma}(1-\gamma)^{1-\gamma}(w/P) = ((\eta+1)/\eta)(\phi N)^{1/\eta}$

which can be solved to obtain N*, the optimal amount of labor supplied

(A15) $N^* = \nu (w/P)^{\eta}$

where $\nu = [\gamma^{\gamma}(1-\gamma)^{1-\gamma}\eta/(\eta+1)]^{\eta}\phi^{-1}$

## II. Firms

Each of the m goods is produced by competitive firms with Cobb-Douglas production functions. The total production of good i, $Y_i$, is given by the production function

(A16) $Y_i = A_i N_i^{\rho_i} K_i^{1-\rho_i} \qquad i = 1,\dots,m$

The firms are assumed to be competitive and thus take the nominal price of their output, $P_i$, the nominal rental price of capital, r, and the nominal price of labor, $D_i w$, as fixed. Note that the nominal price of labor consists of two parts: w reflects the nominal wage rate excluding the cost of post-retirement health benefits covered by FAS 106. The factor $D_i$ reflects the impact on the cost per unit of labor of post-retirement health benefits covered by FAS 106. For firms that do not offer post-retirement health benefits, $D_i = 1$. For firms that offer such benefits, $D_i > 1$. Competitive firms choose $N_i$ and $K_i$ to maximize

(A17) $P_i A_i N_i^{\rho_i} K_i^{1-\rho_i} - wD_i N_i - rK_i \qquad i = 1,\dots,m$

The first-order conditions for labor and capital are

(A18) $\rho_i P_i Y_i / N_i = wD_i \qquad i = 1,\dots,m$

(A19) $(1-\rho_i) P_i Y_i / K_i = r \qquad i = 1,\dots,m$

Given the nominal wage w and the FAS 106 factor $D_i$, (A18) determines the amount of labor demanded in sector i; given the rental price of capital, (A19) determines the amount of capital demanded in sector i.

## III. Market Equilibrium

Equilibrium in the factor markets requires that the aggregate amount of labor demanded equal the supply of labor and the aggregate amount of capital demanded equal the supply of capital:

(A20) $\Sigma_i N_i = N^*$

(A21) $\Sigma_i K_i = K^*$

The amount of money demanded equals the amount initially held by consumers

(A22) $M = M^*$

The amount of good i produced must equal the amount of good i demanded, so that using (A12) we obtain

(A23) $Y_i = \alpha_i^{\theta} (P_i/P)^{-\theta} (\gamma/(1-\gamma)) M/P$

The nominal value of production must equal the nominal value of total factor payments, including the (present value of the) cost of post-retirement health benefits,

$$\text{(A24)} \quad \Sigma_i P_i Y_i = rK^* + w\Sigma_i D_i N_i$$

The nominal value of total resources available to the household, I, equals the initial holding of money $M^*$ plus capital income $rK^*$, wage income, $w\Sigma_i N_i$, and the present value of post retirement health benefits $\pi = w\Sigma_i (D_i - 1) N_i$ so that

$$\text{(A25)} \quad I = M^* + rK^* + w\Sigma_i D_i N_i$$

The solution to the model consists of the equilibrium conditions (A20) - (A25), the production functions (A16), the labor demand equations (A18), the capital demand equations (A19), and the definition of the price index (A4).

## Part II: Calibration of the model

The model is calibrated so that in the absence of FAS 106 it yields an allocation of labor across sectors that matches the actual allocation of labor across sectors. It is also calibrated such that in the absence of FAS 106, all nominal prices are equal to one.

Inputs to the calibration procedure:

$\eta$, the elasticity of labor supply

$\theta$, the elasticity of substitution between the consumption of any two goods

$\gamma$, the share of nominal expenditure devoted to produced goods

$N_o^*$, the initial total amount of labor to be allocated across sectors

$K^*$, the fixed total amount of capital to be allocated across sectors

$\rho_i$, the share of labor in total cost in sector i

$D_i$, the FAS 106 cost factor in sector i (equal to 1 in the absence of FAS 106)

$s^N_i = N_i/N^*$, the fraction of labor employed in sector i

In the initial calibration, all nominal prices are set equal to one

(B1) $P_i = 1, \qquad i = 1,\ldots,m$

(B2) $P = 1$

The amount of labor initially used in each sector follows directly from the fraction of the labor force employed in sector i, $s^N_i$, and the total amount of labor employed, $N_o^*$

(B3) $N_i = s^N_i N_o^* \qquad\qquad i = 1,\ldots,m$

Define $s^Y_i = P_iY_i/\Sigma_i P_iY_i$ to be the share of sector i's output $P_iY_i$ in total output $\Sigma_i P_iY_i$. Then using the labor demand equation (A18) and the fact that the total amount of labor employed is $N_o^*$, it can be shown that

(B4) $s^Y_i = (D_i s^N_i/\rho_i)/\Sigma_i(D_i s^N_i/\rho_i) \qquad\qquad i = 1,\ldots,m$

Using the capital demand equation (A19) and the fact that the total amount of capital used is $K^*$, it can be shown that

(B5) $K_i = [(1-\rho_i)s^Y_i/\Sigma_i(1-\rho_i)s^Y_i]\ K^* \qquad\qquad i = 1,\ldots,m$

Normalize $A_1 = 1$ so that the production function in the first sector is

(B6) $Y_1 = N_1^{\rho_1} K_1^{1-\rho_1}$

Using $Y_1$ from (B6), the nominal wage and the nominal rental price of capital can be determined from the first-order conditions (A18) and (A19) for sector 1 to obtain

(B7) $w = \rho_1 Y_1 P_1/(D_1 N_1)$

(B8) $r = (1-\rho_1) Y_1 P_1/K_1$

Now calculate $\nu$ in the labor supply curve (eq. A15) as

(B9) $\nu = N_o^*(P/w)^\eta$

To calibrate $A_i$, $i = 2,\ldots,m$, substitute the production function (A16) into the first-order condition for labor (A18) and set $P_i = 1$ (eq. B1) to obtain

(B10) $A_i = (D_i w/\rho_i)(N_i/K_i)^{1-\rho_i}$ $\qquad i = 2,\ldots,m$

Now set all prices equal to 1 in the equilibrium condition (A23), and use (A22) to obtain

(B11) $Y_i = \alpha_i^\theta(\gamma/(1-\gamma))M^*$

Summing (B11) over all i we obtain

(B12) $\Sigma_i Y_i = (\gamma/(1-\gamma))M^* \, \Sigma_i \alpha_i^\theta$

Now observe that with $P = P_i = 1$ for all i, equation (A4) implies that

(B13) $\Sigma_i \alpha_i^\theta = 1$

Substituting (B13) into (B12) and rearranging yields

(B14) $M^* = ((1-\gamma)/\gamma)\, \Sigma_i Y_i$

Finally, substituting (B14) into (B11) and recalling that when $P_i = P = 1$, $s^Y_i = Y_i/\Sigma Y_i$, we obtain

(B15) $\alpha_i^\theta = s^Y_i$ $\qquad i = 1,\ldots,m.$

# ATTACHMENT C

**TABLE OF CONTENTS**
**ATTACHMENT C**

# Bell Atlantic
# 1991
# Annual Report

## *Highlights*

| *(Dollars in Millions, Except Per Share Amounts)* | *1991* | *1990* | *Change* |
|---|---|---|---|
| ***For the Year*** | | | |
| Operating revenues: | | | |
| Communications and Related Services | **$11,643.9** | $11,525.3 | + 1% |
| Financial and Real Estate Services | **635.8** | 772.7 | − 18% |
| | **$12,279.7** | $12,298.0 | − |
| Income before cumulative effect of change in accounting principle | **$ 1,331.6** | $ 1,312.5 | + 1% |
| *Net income (loss) | **$ (222.7)** | $ 1,312.5 | −117% |
| ***At Year-End*** | | | |
| Total assets | **$27,881.6** | $27,998.5 | − |
| Long-term debt | **$ 7,959.5** | $ 8,171.1 | − 3% |
| Shareowners' investment | **$ 7,831.3** | $ 8,930.0 | − 12% |
| Number of employees | **75,700** | 81,600 | |
| Number of shareowners of record | **1,098,000** | 1,151,000 | |
| ***Per Share*** | | | |
| Income before cumulative effect of change in accounting principle | **$ 3.41** | $ 3.38 | + 1% |
| Net income (loss) | **$ (.53)** | $ 3.38 | −116% |
| Dividends declared | **$ 2.52** | $ 2.36 | + 7% |
| Net book value at year-end | **$ 19.77** | $ 22.71 | − 13% |
| Market price range | **$ 54⅛-43** | $ 57⅛-39½ | |
| ***Other Data*** | | | |
| Return on average common equity | **(2.9)%** | 14.8% | |
| Additions to plant, property and equipment | **$ 2,594.1** | $ 2,616.8 | − 1% |
| Weighted average number of common shares and equivalent shares outstanding (in millions) | **394.8** | 393.6 | |

****Results were affected by a one-time, non-cash, after-tax accrual of approximately $1.55 billion to adopt a new accounting standard on health and life insurance benefits for retirees. By January 1, 1993, all large corporations must adhere to the new rule: Statement of Financial Accounting Standards No. 106. The charge represents the present value of health and life insurance benefits accumulated by active and retired Bell Atlantic employees through December 31, 1990.***

# A Message from the Chairman

**TO OUR SHAREOWNERS:**

As you can see, we're communicating with you in a new way this year.

We've listened to what you told us about what you—the owners of the business—need to know. We've taken into consideration the environmental costs of producing a traditional "Annual Report" for our huge shareowner base. And we've considered our own "best cost" commitment that every dollar we spend be devoted to meeting customer and shareowner requirements.

As a result, we have tried to respond to your information requirements in the most easy-to-use, cost-effective, and environmentally responsible format possible:

- You have in your hands this year's *Annual Report*—which contains this *chairman's message*, with a strategic overview of Bell Atlantic and our major lines of business; *highlights* of our 1991 performance; and *full and complete financial statements* for 1991.
- In this mailing, you also received the 1991 *Proxy Statement*. [*See box below for more details.*]

We offer this new format as one small example of our commitment to prudent management, on the one hand, and constant innovation, on the other. In an era of increasing competition and economic recession, I believe that both those characteristics will be vital to our continued growth and success.

## *1991 Financial Review*

The recession affected our business volumes in 1991, constrained revenue growth and put a premium on expense control. At the same time, the competitive environment for communications and information services grew more dynamic, requiring that we continue to make bold strategic decisions to position ourselves for leadership over the long term.

Our 1991 results reflect both short-term pressures and long-term initiatives. Due primarily to the recession and price reductions, total operating revenues were about level with last year's. Income before a change in accounting principle was up 1.5 percent. As testimony to our ability to control our costs, total operating expenses for the year grew less than 1 percent over 1990 levels. Moreover, 1991 expenses include one-time charges attributable to our early retirement program, which reduced our management force by more than 3,200 and will result in future, on-going cost savings.

Our bottom line was affected by a one-time, non-cash, after-tax charge of approximately $1.55 billion for the adoption of new accounting rules for retiree health and life insurance benefits, which resulted in a loss of $222.7 million for the year. While all large U.S. companies will have to implement this new accounting standard by 1993, we decided to put this requirement behind us and stay ahead of the curve by recognizing the true costs of health care expenses in operating results.

Given the climate of economic uncertainty and the modest growth in access lines, we are pleased with our 1991 performance—steady operating results, our eighth straight dividend increase, and a solid record of expense control—and we are cautiously optimistic about an economic recovery in 1992. More broadly, the strategic initiatives we undertook in 1991 put us in a good position for long-term earnings growth and sustainable competitive advantage in the global market for information and communications services.

*All 1991 shareowner publications have been produced using recycled paper. The combined cost of producing these publications is less than a third of the cost of our traditional annual report and proxy.*

*In addition to the annual report and proxy package that is being sent to all shareowners, we have also produced a limited quantity of a full-color publication—"1991: A Year in Review"—for more general information purposes. If you wish, you may request this publication by writing to us at P.O. Box 44027; Jacksonville, FL 32232-4027. Please include your name, return address, and Social Security number with your request. Allow six weeks for delivery.*

## *Strategic Overview*

Our basic business strategy is designed to help us realize our corporate vision: *to become a leading international communications and information-management company.* Our approach to achieving that vision has been consistent. In our regional markets, we aim to be the undisputed leader in each of our strategic businesses. And to achieve global leadership, we are aggressively pursuing opportunities in national and international markets where our core competencies will allow us to achieve pre-eminence. We focus our resources on certain key strategic businesses—network services, wireless communications, international, and business systems.

In 1991, we made a great deal of progress toward our vision:

- We continued to invest at high levels in our core landline telephone network. We are well on our way to transforming what were once "utility" businesses into highly effective, customer-focused enterprises with new and expanding revenue streams.
- Bell Atlantic Mobile Systems already is one of the largest cellular carriers in the U.S. With our pending merger with Metro Mobile CTS, Inc.—one of the nation's premier independent wireless companies—Bell Atlantic truly will have a major strategic position in the second dominant communications technology of the 1990s. This transaction will dilute earnings per share in the near term but greatly expand our growth potential for the long term.
- We continued to look for investment opportunities in high-growth markets that allow us to apply our expertise in the building and management of complex communications networks, both at home and abroad. To provide the capital required for such strategic investments, we have de-emphasized our financial services operations and repositioned or divested some non-strategic businesses.
- And through a comprehensive program of total quality management involving thousands of training hours and reaching every employee in our company, we are making a strategic investment in our people to equip them with the skills, the knowledge, and the authority to address customer requirements and improve their work processes.

## *1991 in Review*

Here is a look at our 1991 accomplishments and strategic thrust in each of our principal lines of business.

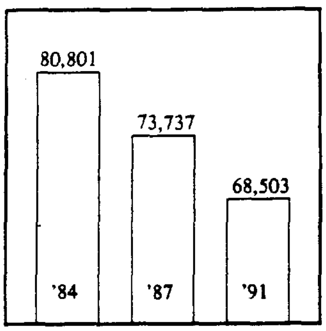
### Network services

In a number of important ways, our network services companies ended 1991 in a strong competitive position:

- We successfully marketed several new network products and services for the consumer and small business markets, and our results demonstrate that demand for these services is strong and growing, even in a recessionary climate.
- We continued to demonstrate how information technology can improve the quality of life in a wide variety of ways: in education, through "distance learning" applications that extend scarce educational resources; in social patterns, by facilitating such alternate work arrangements as telecommuting; and in medicine, by providing the technology for remote diagnostics.
- We won several important government contracts, including one worth $600 million over 10 years to modernize the telecommunications system for the U.S. Department of Defense, using state-of-the-art ISDN technology.
- We reduced our management force through an early retirement program. Our telephone companies now have fewer than 40 employees per 10,000 access lines—the most productive of all the regional Bell companies and among the most efficient telephone companies in the world.
- And we made progress in changing regulation to reflect competitive realities.

Our strategy in network services is to expand our leadership in the key areas that will enable us to grow profitably in the 1990s, such as regulatory reform, technology, new product introduction, and cost and quality competitiveness.

Bell Atlantic is among the most successful of the regional Bell companies in achieving regulatory reform that truly incorporates the requirements of an increasingly competitive communications environment. We have been able to implement innovative regulatory reform plans



Number of network services employees

in several of our jurisdictions that provide predictable rates for basic services, encourage the introduction of new products and services, provide incentives for the building of a modern communications infrastructure, and allow shareowners to earn an appropriate return on their investment.

Because of these innovative plans, we have been able to maintain high levels of service for telephone ratepayers while retaining more of what we earn on competitive services. This allows us to invest aggressively in state-of-the-art communications technology. We have invested more than $18 billion since divestiture in network modernization and growth—including digital switching, software controls, and thousands of miles of fiber-optic cable—making us a national leader in introducing new technologies.

Technology leadership creates another kind of leadership, in the introduction of new services. Using "intelligent network" technology, we have introduced more than 25 new products and services, and, with the landmark decision allowing us to compete in the field of information services, we are evaluating scores of opportunities to introduce even more. We expect that, together, these new products and services—which include Bell Atlantic® IQ℠ Services like Caller ID and Return Call, voice messaging services like Answer Call, and data services like ISDN—will generate between $600 million and $900 million in new revenues by the middle of the decade.

Already, the margins from these new services are fueling Bell Atlantic's growth. In 1991, demand for IQ Services and other intelligent network services was extremely healthy: revenue from these services more than doubled and their customer base grew by more than two-thirds. Subscription rates for Caller ID and Return Call were particularly gratifying. In addition, the number of times customers took advantage of our "pay-per-use" offerings—4.5 million individual uses per month—indicates the mass market appeal of these convenient calling features.

**We have invested more than $18 billion in network modernization and growth—making us a national leader in introducing new technologies.**

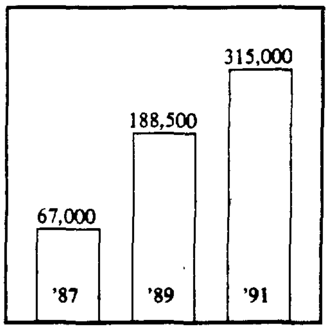
It is our leadership in intelligent network technology and our low-cost position that will enable us to meet the challenges of an increasingly competitive marketplace for local exchange services. It also will be the springboard for our leadership in the next wave of new communications services: broadband. We are already investing in the next generation of fiber-optics, compression technologies, and other advances. This leadership position will enable us to expand permanently the capacity of our network to generate new services, broaden our revenue streams, and fuel earnings growth over the long term.

## Wireless

1991 was a positive year for Bell Atlantic Mobile Systems:

- At the end of the year, Mobile Systems, either directly or through subsidiaries and partnerships, had 22.1 million "populations served" (POPs) in 10 metropolitan statistical areas. We also have 2.6 million POPs in 16 rural service areas.
- Despite the recession, our subscriber base grew by 22.6 percent, to 315,000 at year-end.

But the big news in 1991 was the announcement of our intention to merge with Metro Mobile CTS, Inc. With this agreement, Bell Atlantic stated loud and clear that we intend to be a pre-eminent provider of wireless services. The transaction will be accomplished by the merger of Metro Mobile into a Bell Atlantic subsidiary for a price of roughly $2.45 billion, involving issuance of about one share of Bell Atlantic for every two of Metro Mobile.



Growth in Bell Atlantic Mobile Systems customers

This transaction does several things for us strategically.

- It will give us a much larger footprint in a high-growth communications business for the '90s. With the addition of more than 11 million POPs in the northeast, the southeast, and the southwest, we will become one of the largest cellular carriers in the nation, with the most extensive network coverage on the eastern seaboard.
- The technological and market leadership we gain positions us perfectly for the high-growth world of personal communications services.

Another step toward establishing our national presence was the signing of a letter of intent for the development and implementation of a nationwide cellular brand identity by Bell Atlantic Mobile Systems, along with four other leading mobile communications carriers.

We believe that, as wireless services become more valuable to customers, we are rapidly approaching the era of truly universal wireless service. We are estimating annual customer growth in wireless of as much as 30 percent, versus 3 percent access line growth for landline.

Given our experience in managing our existing wireless operation profitably, we believe we have the right vision, the right strategies, and the right operational capabilities to make Metro Mobile and Bell Atlantic Mobile Systems into the best wireless carrier in the United States.

### International

We had an exciting year in 1991 in our international operations, putting us well down the road to realizing our vision:

- Our initial public offering of shares in Telecom Corporation of New Zealand was highly successful, netting a gain of $74 million and confirming the value of our permanent investment in that company. We will continue to evaluate privatization opportunities as they occur around the world.
- We inaugurated cellular service in Czechoslovakia by placing the first call on the new cellular system we built along with the Czech and Slovak governments and U S WEST.
- We are consulting on various telecommunications projects with telephone companies around the world, and we recently announced plans to form a joint venture with STET, the Italian phone company, that would create an advanced strategic software company in Italy.
- We re-aligned our European computer maintenance business into a joint venture with International Computers Limited (ICL), one of Europe's largest computer firms.

Our basic approach in international is to expand our communications franchise by extending the strengths of our domestic business in network, wireless, and business systems.

We look for international opportunities with the potential to add to shareowner value, a favorable regulatory environment, government stability, and significant market development opportunities. We also look for areas where there are multiple business opportunities and strong potential for forging key strategic alliances.

### Business systems and other capabilities

Our strategy in business systems is to provide customers with high-value solutions to business problems through systems integration, applications software, and computer services. We are developing our capabilities in markets where we have or can build technical expertise and an in-depth knowledge of customer requirements.

- Our systems integration joint venture with American Management Systems signed an agreement with NuMedia Corporation in 1991 that enables us to offer customers such multimedia features as full motion video on a personal computer. We are the first outside vendor to work directly with Digital Equipment Corporation to develop and market a version of Digital's popular computer protocol through our software systems company. And our computer services company announced partnerships with Amdahl and NCR to provide single-source multi-vendor services. These are in addition to partnerships already formed with manufacturers and systems integration industry leaders such as Sun Microsystems, Dell, and SunGard.
- In our target markets, Bell Atlantic Healthcare Systems added 23 new hospitals and other health care institutions to its customer base, just over a year after we launched the company by acquiring a leading health care information systems supplier. We are also actively seeking joint ventures and strategic alliances in the government, education and utility markets, areas where we see strong demand for the movement and management of information.

We continue to de-emphasize our financial services business, particularly our computer systems leasing division, and have confined real estate development largely to internal requirements.

We believe that, together, our international, wireless, and business systems lines of business will produce about 20 percent of our revenue stream in five years and will account for about half of our net income growth.

## *Outlook for the 1990s*

Perhaps the most positive development in 1991 was the wide and growing support the Bell companies gained in our drive to be full participants in the information age. We were particularly pleased by the Court of Appeals' ruling that permits us to enter the information services market; the FCC's proposal to allow telephone companies to offer video dial-tone services; and the movement of a bill on manufacturing relief through the Senate.

We are confident that we have built a company that can thrive in an increasingly open marketplace—one that can do what competitive companies do: innovate constantly, set ever-higher standards of customer satisfaction, and respond to customer needs more quickly than competitors.

**Connecting customers with what they want, when they want it will be a major source of revenue growth for information and communications companies—a capability that is at the very heart and soul of our business.**

In our view, the full range of customer requirements in the communications marketplace of the next decade can only be served by an intelligent broadband network that is available to all customers and easily accessible to all information service providers.

Connecting customers with *what they want, when they want it* will be a major source of revenue growth for information and communications companies—a capability that is the very heart and soul of our business. As fiber-optics and digital switching speed the evolution of our switched network architecture, we are rapidly building a universal information highway that facilitates individual customer choice, control, and convenience.

Our intelligent broadband network will provide widespread benefits. On the individual level, it will expand personal choice by stimulating the widest possible array of innovative services for consumers. On a broader level, a modern communications infrastructure will enable businesses to manage information for competitive advantage in global markets. And because broadband technology will stimulate revenue-generating new products and services, it will be a source of growth in shareowner value for Bell Atlantic's investors.

We are actively seeking strategic partnerships with newspaper publishers, cable TV operators, media companies, and other information services providers to maximize our ability to satisfy the public's growing demand for new services. As regulatory and legislative barriers to our full participation in the video marketplace fall, we are encouraged by the interest these information service providers show in using our network for the distribution of their services.

It is vital that the benefits of the information age not be denied to the American public any further by any legislation designed to exclude the Bell telephone companies from the marketplace for video and information services. Several bills currently under consideration in Congress (for example, HR 3515, sponsored by Rep. Jim Cooper, and S 2112, sponsored by Sen. Daniel Inouye) seek to undo the progress made when the Court of Appeals ruled in 1991 to allow us to enter this market. Bell Atlantic is vigorously opposing "roll-back" legislation, and we urge you to do the same.

In our judgment, not all communications providers will benefit equally from the new opportunities inherent in a more open marketplace. Leadership begets leadership—in technology, in innovation, in quality improvement. Because of our dedication to quality, to a "best cost" spending policy, and to learning the behaviors and conventions necessary to functioning as a high-performing team, we believe we have a secret weapon in our pursuit of excellence—a way of working together; a unity of purpose; and an atmosphere of accountability, communication, and teamwork that will help us succeed where others have not.

That secret weapon—which we call "the Bell Atlantic Way"—will give us the competitive edge we need to benefit from the fundamental changes taking place in the communications industry.

Raymond W. Smith
Chairman and Chief Executive Officer
Bell Atlantic Corporation
March 2, 1992

## BELL ATLANTIC CORPORATION AND SUBSIDIARIES

## SELECTED FINANCIAL AND OPERATING DATA

(Dollars in Millions, Except
Per Share Amounts)

| | 1991* | 1990** | 1989*** | 1988 | 1987 |
|---|---|---|---|---|---|
| Operating revenues | $12,279.7 | $12,298.0 | $11,448.6 | $10,880.1 | $10,747.3 |
| Operating income | $ 2,525.4 | $ 2,609.6 | $ 2,012.8 | $ 2,244.5 | $ 2,382.7 |
| Income before cumulative effect of change in accounting principle | $ 1,331.6 | $ 1,312.5 | $ 1,074.5 | $ 1,316.8 | $ 1,240.4 |
| Net income (loss) | $ (222.7) | $ 1,312.5 | $ 1,074.5 | $ 1,316.8 | $ 1,240.4 |
| Income before cumulative effect of change in accounting principle per common share | $ 3.41 | $ 3.38 | $ 2.71 | $ 3.32 | $ 3.12 |
| Net income (loss) per common share | $ (.53) | $ 3.38 | $ 2.71 | $ 3.32 | $ 3.12 |
| Cash dividends declared per common share | $ 2.52 | $ 2.36 | $ 2.20 | $ 2.04 | $ 1.92 |
| Return on average common equity | (2.9)% | 14.8% | 11.7% | 14.5% | 14.4% |
| Book value per common share | $ 19.77 | $ 22.71 | $ 21.78 | $23.29 | $ 22.07 |
| Total assets | $27,881.6 | $27,998.5 | $26,219.7 | $24,729.2 | $23,553.0 |
| Additions to plant, property and equipment | $ 2,594.1 | $ 2,616.8 | $ 2,628.1 | $ 2,619.5 | $ 2,423.2 |
| Long-term debt | $ 7,959.5 | $ 8,171.1 | $ 7,720.6 | $ 6,557.2 | $ 6,741.5 |
| Debt ratio | 56.0% | 54.7% | 52.4% | 47.0% | 46.4% |
| Shareowners' investment | $ 7,831.3 | $ 8,930.0 | $ 8,590.6 | $ 9,176.7 | $ 8,741.9 |
| Network access lines (in thousands) | 17,750 | 17,484 | 17,056 | 16,541 | 16,056 |
| Employees at year-end | 75,700 | 81,600 | 79,100 | 81,000 | 80,950 |

* Results of operations for 1991 include an after-tax charge of $1,554.3 million ($3.94 per share) for the transition effect of the change in method of accounting for postretirement benefits other than pensions discussed in Notes 1 and 9 of the Notes to Consolidated Financial Statements. Income before the cumulative effect of the change in accounting principle for 1991 was increased by $74.1 million ($.19 per share) as a result of the sale of a portion of the Company's investment in Telecom Corporation of New Zealand Limited discussed in Note 13 of the Notes to Consolidated Financial Statements.

** Net income for 1990 was reduced by $60.0 million ($.15 per share) as a result of the revaluation of the Company's investment in its Financial Services business, as discussed in Note 3 of the Notes to Consolidated Financial Statements.

*** Net income for 1989 was reduced by $75.7 million ($.19 per share) due to a change in the method of accounting for postretirement health care benefits of associate employees of the Network Services companies and by $244.8 million ($.62 per share) for restructuring and other charges discussed in Note 3 of the Notes to Consolidated Financial Statements.

## MANAGEMENT'S DISCUSSION AND ANALYSIS OF RESULTS OF OPERATIONS AND FINANCIAL CONDITION

**Results of Operations**

Demand for both traditional and wireless telecommunications in the mid-Atlantic region was negatively affected by the weakened economy in 1991. Although moderate volume growth was achieved, the rates of growth fell below historical levels. Despite recessionary and competitive pressures on revenues, Bell Atlantic Corporation (Bell Atlantic or the Company) was able to modestly improve earnings in 1991 through significant cost-containment efforts.

During 1991, Bell Atlantic initiated several strategic actions consistent with its commitment to long-term financial growth. Those actions included entering into a merger agreement with Metro Mobile CTS, Inc. (Metro Mobile), the nation's second largest independent owner and operator of cellular telephone systems; inauguration of cellular service in Czechoslovakia; and the securing of several large contracts utilizing Integrated Services Digital Network (ISDN) technology. Also, in an effort to sustain its position as a low-cost provider of telecommunications services, the Company achieved a sizeable force reduction through a retirement incentive program offered to eligible management employees.

Bell Atlantic also elected to adopt, effective January 1, 1991, Statement of Financial Accounting Standards No. 106, "Employers' Accounting for Postretirement Benefits Other Than Pensions" (Statement No. 106). In conjunction with this adoption, the Company recorded a one-time, non-cash, after-tax charge of $1,554.3 million representing the actuarial liability for postretirement health and life insurance benefits attributable to prior service of retired and active employees.

Income before the cumulative effect of the change in accounting for postretirement benefits other than pensions increased over 1990 by $19.1 million, or $0.03 per share, representing increases of 1.5% and 0.9%, respectively. These 1991 results included a gain associated with the initial public offering of shares of Telecom Corporation of New Zealand Limited (Telecom), which was more than fully offset by charges associated with the retirement incentive program, related restructuring expenditures, and other corporate initiatives in support of long-term financial objectives. The ongoing benefit costs associated with the adoption of Statement No. 106 also reduced 1991 earnings.

### OPERATING REVENUES

Local service revenues are generated by the telephone subsidiaries from the provision of local exchange, local private line, and public telephone services. Revenues in both 1991 and 1990 were increased by growth in network access lines and higher demand for intelligent network services. Growth in access lines, particularly business lines, was adversely impacted by the weakened economy, as growth rates fell below historical levels. Average access lines grew 1.8% in 1991 and 3.0% in 1990. In addition to the effect of the moderate volume increases, local service revenues were increased due to a variety of intelligent network services offered by the telephone subsidiaries. Revenues from these services grew approximately $70 million or 12% in 1991, compared to growth of approximately $66 million or 13% in 1990. In addition, local service revenues in 1991 increased due to $20.8 million of surcharge revenue recorded by The Bell Telephone Company of Pennsylvania (Bell of Pennsylvania) in connection with the recovery of the added expense related to the intrastate impact of tax legislation enacted during 1991 in Pennsylvania. 1991 revenues also included approximately $15 million recognized by New Jersey Bell Telephone Company (New Jersey Bell) associated with the implementation of enhanced 911 service. 1990 local service revenues included an additional $24.1 million due to the recognition of revenues by Bell of Pennsylvania in connection with the retroactive recoupment of costs incurred to provide discounted employee telephone service, offset in part by an $11.4 million reduction in revenues related to settlements reached between Bell of Pennsylvania, the Pennsylvania Attorney General, and the Office of the Consumer Advocate in connection with an inquiry into Bell of Pennsylvania's past sales and marketing activities.

Network access revenues are received from interexchange carriers (IXCs) for the use of local exchange facilities in providing interstate and intrastate long-distance services to their customers and from end-user subscribers. Switched access revenues are derived from usage-based charges paid by IXCs for access to the Company's network. Special access revenues arise from access charges paid by subscribers who have private lines, and end-user revenues are earned from local exchange carrier customers who pay a flat monthly charge, per access line, for access to the network.

Effective January 1, 1991, the Federal Communications Commission (FCC) adopted price cap regulation and lowered the authorized rate of return for interstate access services from 12.0% to 11.25%. Price caps, a form of incentive regulation, limit prices rather than profits. The FCC's price cap plan includes a sharing provision whereby interstate earnings above certain thresholds are shared equally with customers, while earnings above substantially higher thresholds are returned entirely to customers. Sharing occurs in the form of temporary prospective rate decreases. The telephone subsidiaries reduced their rates for interstate access services on January 1, 1991 to reflect the lower authorized rate of return. In their first Annual Price Cap Tariff filing, effective July 1, 1991, the telephone subsidiaries further reduced their rates. These two rate reductions, net of lower support obligations to the National Exchange Carrier Association pool, reduced 1991 revenues by approximately $47 million.

Network access revenues decreased 1.6% in 1991 after increasing 6.9% in 1990. Growth in access minutes of use was 3.6% and 7.0% in the respective periods. The slowing in the rate of volume growth in 1991 resulted primarily from the weakened regional economy. Revenue increases in 1991 related to this volume growth were substantially offset by the above-mentioned rate reductions. Revised estimates of access revenue liabilities had the effect of decreasing 1991 revenues by approximately $60 million compared with 1990. Those adjustments, recorded primarily in 1990, resulted in increases in revenues in 1990 when compared with 1989.

Toll service revenues declined 0.3% in 1991 after 2.0% growth in 1990. Volumes decreased in WATS and private line service in both years. These volume decreases were offset by 1.8% and 4.8% growth in toll message volumes in 1991 and 1990, respectively. Toll messages began a slower growth trend in the fourth quarter of 1990, which continued throughout 1991. Revenues for 1991 also included $7.7 million of surcharge revenue at Bell of Pennsylvania associated with the aforementioned recovery of additional expenses related to the intrastate impact of tax legislation.

Other Network Services operating revenues include amounts earned from directory advertising, billing and collection services provided to IXCs, and premises services such as inside wire installation and maintenance. Directory advertising revenues were adversely impacted by the weakened economy and increased 4.0% compared with 5.9% in 1990. Premises services revenues increased 5.1% and 20.0% in 1991 and 1990, respectively. While higher rates increased revenues in both years, the 1990 increase was largely a result of the introduction of enhanced wire maintenance plans during that year. Billing and collection revenues decreased $47.3 million and $6.6 million in 1991 and 1990, respectively, due primarily to lower rates and reductions in services provided under long-term contracts signed with two IXCs during 1990.

The increases in the provision for uncollectibles in 1991 and 1990 were primarily a result of the weakened regional economy.

Other Communications and Related Services includes revenues from the Company's domestic and international operations in cellular mobile communications, computer maintenance, software and development support, systems integration, and telecommunications and data processing equipment sales and consulting. These revenues grew 1.7% in 1991 compared with 41.4% in 1990. The 1990 increase was due primarily to the acquisition of the third-party maintenance business of Control Data Corporation. Both 1991 and 1990 reflected revenue increases resulting from continued expansion of the Company's cellular customer base, although the rate of growth has slowed. Declines in average cellular usage per customer occurred in both years, due to continued penetration into the lower usage, casual-user customer market, and the impact of the weakened economy. Increases in both 1991 and 1990 reflect the inclusion of revenues from the June 1990 acquisition of the mid-Atlantic PBX operations of Northern Telecom, Inc. (Northern Telecom). 1991 revenues also reflect growth-related increases in business volumes at the software development subsidiaries. Substantially offsetting these increases in 1991 were lower levels of international telecommunications consulting and the effect on revenues of the July 1991 transfer of the Company's European computer maintenance business to a joint venture with International Computers Limited. Revenues in 1991 were also adversely impacted by lower volumes at the Company's third-party computer maintenance business due to competitive pressures and the weak economy.

The 1991 decline in revenues from the Financial and Real Estate Services companies was principally due to the Company's continuing de-emphasis of this business segment, as well as the impact of the fourth quarter 1990 sale of Bell Atlantic Computer Products, Inc. (Computer Products), a former subsidiary engaged in the sale and leasing of computer equipment. 1990 revenues were greater than in 1989 principally due to increases in the leased asset portfolios of the lease financing subsidiaries.

### Operating Expenses

Employee costs consist of salaries, wages and other employee compensation, employee benefits, and payroll taxes. During 1991, the Company offered a retirement incentive program to eligible management employees electing early retirement from the Network Services companies and certain other subsidiaries. Under this program, approximately 3,200 employees retired on December 15, 1991.

Employee costs increased by $175.5 million or 4.7% in 1991. A [illegible]% increase in salaries and wages resulted from annual wage increases provided for in the labor contracts covering associate employees in the Network Services companies, as well as salary progressions for management and other administrative employees. These increases were partially offset by the effects of hiring freezes and reductions in overtime at the telephone subsidiaries, lower accruals for performance awards and workforce reductions at certain unregulated subsidiaries. **Pension and benefits expense increased 14% in 1991 due primarily to the increases in the costs of providing health care benefits to active and retired employees. This increase included approximately $55 million related to the adoption of Statement No. 106. The Company continued to address the increase in cost caused by health care inflation through implementation of certain medical cost-containment initiatives in 1991 as permitted by labor agreements.** Additional cost-sharing arrangements affecting management employees retiring after December 31, 1991 were also announced during 1991 as part of the Company's plan to control future health care cost increases. 1991 pension and benefits expense also increased by approximately $11 million as a result of costs associated with the retirement incentive program, principally special termination benefits.

In 1990, employee costs increased by $22.0 million primarily as a result of annual wage increases and salary progressions, increased benefit costs, acquisitions, and growth in the Company's unregulated subsidiaries. These increases were substantially offset by the effect of an early retirement program in 1989, under which approximately 1,700 management employees received financial incentives and left the Company. In addition, 1990 employee costs decreased by $64.4 million due to the effect of accounting for the Company's leveraged employee stock ownership plans (ESOPs), which became effective on January 1, 1990. Under ESOP accounting rules, the portion of the Company's contribution representing interest on the ESOP debt is classified as interest expense. This decrease in employee costs was partially offset by a $23.0 million increase in the Company's matching contributions to the saving plans.

Depreciation and amortization expense decreased $78.5 million in 1991. The decrease was caused by the absence of approximately $150 million in depreciation and amortization due to the effects of the completion of accelerated amortization of certain plant assets, the completion of depreciation of certain switching equipment and the conclusion of regulator-approved amortization of depreciation reserve deficiencies at several of the telephone subsidiaries during 1990. In addition, the previously mentioned de-emphasis of the Financial Services companies also had the effect of decreasing 1991 depreciation through reduced amounts of leased equipment held by these companies. These decreases were partially offset by growth in the level of depreciable plant at the telephone subsidiaries and increases of approximately $43 million resulting from represcribed depreciation rates at several of the telephone subsidiaries. Depreciation and amortization expense decreased by $42.7 million in 1990, reflecting the effect of 1989 write-downs for the value of goodwill, amortizable spare parts inventories and other assets of certain unregulated subsidiaries, which increased 1989 expense by approximately $164 million. 1990 expenses also included growth-related increases in depreciable plant and the impact of represcribed depreciation rates.

Other operating expenses decreased $31.1 million in 1991 due in large part to the Company's cost-containment efforts which more than offset inflationary increases. The de-emphasis of the Financial Services companies, including the effect of the 1990 disposition of Computer Products, reduced expenses by $54.9 million. In addition, a higher provision for uncollectibles in 1990 at Bell Atlantic Mobile Systems, Inc. (Mobile Systems) and the July 1991 transfer of the Company's European computer maintenance business to a joint venture had the effect of decreasing 1991 expenses when compared with 1990. Substantially offsetting these decreases in other operating expenses were 1991 increases including approximately $58 million of restructure-related costs associated with the retirement incentive program and $21.4 million of additional capital stock, property, and gross receipts taxes related to the previously mentioned tax legislation in Pennsylvania. Results for 1991 also included higher expenses resulting from the June 1990 acquisition of